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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/957,484	09/20/2001	Yoshinori Matsumoto	450100-03496	3152

20999 7590 03/11/2005

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EXAMINER	
BATTAGLIA, MICHAEL V	
ART UNIT	**PAPER NUMBER**
2652	

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/957,484	MATSUMOTO, YOSHINORI	
	Examiner	Art Unit	
	Michael V Battaglia	2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 September 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Amendment to the specification so as to have clear support or antecedent basis for "wherein said correction of said focus precision can be performed quickly because acquisition of the signal from an already recorded track closest to said Nth track enables said correction to be performed without actually moving to said Nth track" in claims 1, 6 and 7 without introducing any new matter is necessary to insure certainty in construing the claims in the light of the specification.

Claim Objections

2. Claims 1, 6 and 7 and therefore claims 2-5 and 8-10 are objected to because of the following informality. On line 11 of claims 1, 6 and 7, replacing "can be" with -is-- is suggested. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verboom et al (hereafter Verboom) (US 5,574,706) in view of Nagawa et al (hereafter Nagawa) (US 5,986,592).

It is noted that the additional limitation that "said correction of said focus precision is performed quickly because acquisition of RF signal from an already recorded track closest to said Nth track enables said correction to be performed without actually moving to said Nth track" is inherent to obtaining an RF signal from an already recorded track closest to said Nth track, which was already included in the claim limitations previous to the outstanding amendment, because, as described in the claim language, "acquisition of" or obtaining the RF signal from an already recorded track closest to said Nth track "enables" said correction to be performed without actually moving to said Nth track, which is the reason that or cause for ("because") correction of said focus precision is performed quickly. As a result, the addition of the "said correction of said focus precision is performed quickly because acquisition of the signal from an already recorded track closest to said Nth track enables said correction to be performed without actually moving to said Nth track" limitation does not further limit the scope of the claim and the rejection of the claim applied before the addition of the outstanding amendment still applies. Even if the additional limitation is not inherent to obtaining the signal from an already recorded track closest to said Nth track, the rejection below applies.

In regard to claim 1, Verboom discloses a recording and playback apparatus for recording data onto a predetermined recording medium and playing back said data from said recording medium, said recording and playback apparatus comprising: judgment means (Fig. 4, element 104) for forming a judgment as to whether or not to correct focus precision in an operation to record data onto an Nth track of said recording medium or play back data from said Nth track (Col. 6,

lines 15-19); and correction means (Fig. 4, element 164) which is used for correcting said focus precision if said judgment means forms a judgment to correct said focus precision in said operation to record data onto said Nth track of said recording medium or play back data from said Nth track by using a signal obtained from an already recorded track closest to said Nth track (Col. 6, lines 22-26 and Col. 3, lines 49-59), wherein said correction of said focus precision is performed quickly because acquisition of the signal from an already recorded track closest to said Nth track enables said correction to be performed without actually moving to said Nth track (Col. 3, lines 49-59 and Col. 6, lines 15-26). It is noted that because the signal from an already recorded track closest to said Nth track is acquired during initialization and correction information determined therefrom is stored (Col. 3, lines 49-59), said correction is performed without actually moving to the Nth track because the apparatus of Verboom will already be at the Nth track (Col. 6, lines 15-26). Verboom does not disclose that the obtained or acquired signal is an RF signal. However, Verboom discloses that data are recorded in a run-length-limited (RLL) code (Col. 4, lines 55-57).

Nakagawa discloses obtaining an RF signal to reproduce data recorded on a recording medium in a RLL code (Col. 1, lines 6-9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the obtained signal of Verboom to be an RF signal as suggested by Nakagawa, the motivation being to reproduce the RLL coded data of Verboom in a manner known in the art.

In regard to claim 4, Verboom discloses that recording and playback apparatus according to claim 1 wherein said correction means is capable of correcting said focus precision by using a signal played back from an (N - 1)th track immediately preceding said Nth track (Col. 3, lines 49-59). The examiner notes when the Nth track is the immediately following a Standard Format Part

(SFP) track, the nearest SFP that is used to correct focus precision will be the (N-1)th immediately preceding said Nth track.

In regard to claim 6, Verboom discloses a recording and playback method for recording data onto a predetermined recording medium and playing back said data from said recording medium, said recording and playback method comprising: a judgment step of forming a judgment as to whether or not to correct focus precision in an operation to record data onto an Nth track of said recording medium or play back data from said Nth track (Col. 6, lines 15-19); and a correction step which is executed for correcting said focus precision if, at said judgment step, a judgment is formed to correct said focus precision in said operation to record data onto said Nth track of said recording medium or play back data from said Nth track by using a signal obtained from an already recorded track closest to said Nth track (Col. 6, lines 22-26 and Col. 3, lines 49-59), wherein said correction of said focus precision is performed quickly because acquisition of the signal from an already recorded track closest to said Nth track enables said correction to be performed without actually moving to said Nth track (Col. 3, lines 49-59 and Col. 6, lines 15-26). It is noted that because the signal from an already recorded track closest to said Nth track is acquired during initialization and correction information determined therefrom is stored (Col. 3, lines 49-59), said correction is performed without actually moving to the Nth track because the apparatus of Verboom will already be at the Nth track (Col. 6, lines 15-26). Verboom does not disclose that the obtained signal is an RF signal. However, Verboom discloses that data are recorded in a run-length-limited (RLL) code (Col. 4, lines 55-57).

Nakagawa discloses obtaining an RF signal to reproduce data recorded on a recording medium in a RLL code (Col. 1, lines 6-9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the obtained signal of Verboom to be an RF signal as suggested by Nakagawa, the motivation being to reproduce the RLL coded data of Verboom in a manner known in the art.

In regard to claim 7, Verboom discloses a recording medium for recording a program to be executed by a computer to record data onto a predetermined recording medium and play back said data from said recording medium, said program comprising: a judgment step of forming a judgment as to whether or not to correct focus precision in an operation to record data onto an Nth track of said recording medium or play back data from said Nth track (Col. 6, lines 15-19); and a correction step which is executed for correcting said focus precision if, at said judgment step, a judgment is formed to correct said focus precision in said operation to record data onto said Nth track of said recording medium or play back data from said Nth track by using a signal obtained from an already recorded track closest to said Nth track (Col. 6, lines 22-26 and Col. 3, lines 49-59), wherein said correction of said focus precision is performed quickly because acquisition of the signal from an already recorded track closest to said Nth track enables said correction to be performed without actually moving to said Nth track (Col. 3, lines 49-59 and Col. 6, lines 15-26). It is noted that because the signal from an already recorded track closest to said Nth track is acquired during initialization and correction information determined therefrom is stored (Col. 3, lines 49-59), said correction is performed without actually moving to the Nth track because the apparatus of Verboom will already be at the Nth track (Col. 6, lines 15-26). It is further noted that the program of Verboom is inherently recorded on a recording medium. It is still further noted that even if the program is implemented in hardware, software or a combination of hardware and software, the claimed recording medium reads on the circuit board, semiconductor chip, or

memory on which a function or program is recorded. Verboom does not disclose that the obtained signal is an RF signal. However, Verboom discloses that data are recorded in a run-length-limited (RLL) code (Col. 4, lines 55-57).

Nakagawa discloses obtaining an RF signal to reproduce data recorded on a recording medium in a RLL code (Col. 1, lines 6-9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the obtained signal of Verboom to be an RF signal as suggested by Nakagawa, the motivation being to reproduce the RLL coded data of Verboom in a manner known in the art.

In regard to claim 8, Verboom discloses that correcting said focus precision using an obtained signal is based on a predetermined performance function (Col. 3, lines 56-57). It is noted that a function is inherent to Verboom's determining of a focus-offset value from the obtained signal and that the claimed "predetermined performance function" reads on the inherent function that improves the performance of the apparatus by determining a focus-offset value. Therefore, in the recording and playback apparatus of Verboom in view of Nakagawa in which the obtained signal used to correct focus precision is an RF signal, the correcting is based on a predetermined performance function.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Verboom in view of Nakagawa, as applied to claim 1 above, and further in view of Niwayama (US 5,485,443).

Verboom in view of Nakagawa discloses the apparatus of claim 1 that includes a judgment means capable of forming a judgment to correct said focus precision. Verboom does not disclose that the judgment to correct said focus precision is made based on if a predetermined period of time is determined to have lapsed.

Niwayama discloses a judgment means capable of forming a judgment to correct said focus precision if a predetermined period of time is determined to have lapsed (Col. 12, lines 1-5). Niwayama teaches that automatic restoration of an in-focus condition is not always possible due to a decrease in return light caused by an out-of-focus position. By determining if a predetermined period of time has lapsed, focus precision is corrected when automatic restoration fails (Col. 11, lines 51-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the judgment means of Verboom capable of forming a judgment to correct said focus precision if a predetermined period of time is determined to have lapsed as suggested by Niwayama, the motivation being to correct focus precision that cannot be correct by automatic restoration.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Verboom in view of Nakagawa, as applied to claim 1 above, and further in view of Koyama et al (hereafter Koyama) (US 5,517,475).

Verboom in view of Nakagawa discloses the apparatus of claim 1 that includes a judgment means capable of forming a judgment to correct said focus precision. Verboom does not disclose that the judgment to correct said focus precision is made based on if a temperature inside a disk drive setting said recording medium is determined to have increased by a predetermined temperature raise.

Koyama discloses a judgment means capable of forming a judgment to correct said focus precision if a temperature inside a disk drive setting said recording medium is determined to have increased by a predetermined temperature raise and teaches doing so will correct position shifts of optical parts and a light spot shift caused by temperature change (Fig. 21 and Col. 16, lines 15-39).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the judgment means of Verboom capable of forming a judgment to correct said focus precision if a temperature inside a disk drive setting said recording medium is determined to have increased by a predetermined temperature raise as suggested by Koyama, the motivation being to correct position shifts of optical parts and a light spot shift caused by temperature change.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Verboom in view of Nakagawa, as applied to claim 1 above, and further in view of Tani et al (hereafter Tani) (US 6,574,177).

Verboom in view of Nakagawa discloses the apparatus of claim 1 having a correction means. Verboom does not disclose that the correction means is capable of correcting said focus precision by determining a focus bias value fd that provides the absolute value of a difference within a threshold value k where said difference is a difference in amplitude or a difference in jitters value between a signal obtained at a focus bias of (fd + a) and a signal obtained at a focus bias of (fd - a), and notation a denotes a change quantity.

Tani discloses a correction means capable of correcting said focus precision by determining a focus bias value fd that provides the absolute value of a difference within a threshold value k where said difference is a difference in amplitude or a difference in jitters value between a signal obtained at a focus bias of (fd + a) and a signal obtained at a focus bias of (fd - a), and notation a denotes a change quantity (Fig. 12). The examiner interprets FO of Fig. 12 as fd and S46 of Fig. 12 as k. The correction means of Tani accurately corrects focus precision so that crosstalk is eliminated and high density reading and recording is possible (Col. 1, lines 45-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the correction means of Verboom with a correction means that determines a focus bias value fd that provides the absolute value of a difference within a threshold value k where said difference is a difference in amplitude or a difference in jitters value between a signal obtained at a focus bias of (fd + a) and a signal obtained at a focus bias of (fd - a) as suggested by Tani, the motivation being to accurately correct focus precision and eliminate crosstalk and successfully accomplish high density reading and recording.

7. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verboom in view of Nakagawa as applied to claim 8 above, and further in view of Okada et al (hereafter Okada) (US 6,430,119).

In regard to claim 9, Verboom in view of Nakagawa discloses the recording and playback apparatus of claim 8 wherein correcting focus precision using an RF signal is based on a predetermined performance function. Varboom does not disclose how the predetermined performance function is computed and therefore Verboom in view of Nakagawa does not disclose that said performance function is computed using the amplitude of the RF signal.

Okada discloses computing a predetermined performance function on which correction of focus precision is based using the amplitude of an RF signal (Figs. 13-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to compute the predetermined performance function of Verboom in the apparatus of Verboom in view of Nakagawa using the amplitude of the RF signal of Verboom in view of Nakagawa as suggested by Okada, the motivation being to compute the predetermined performance function of Verboom in view of Nakagawa on which correction of focus precision is based in a manner known in the art to correct focus precision.

In regard to claim 10, Verboom in view of Nakagawa discloses the recording and playback apparatus of claim 8 wherein correcting focus precision using an RF signal is based on a predetermined performance function. Varboom does not disclose how the predetermined performance function is computed and therefore Verboom in view of Nakagawa does not disclose that said performance function is computed using the jitter value of the RF signal.

Okada discloses computing a predetermined performance function on which correction of focus precision is based using the jitter value of an RF signal (Figs. 1-4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to compute the predetermined performance function of Verboom in the apparatus of Verboom in view of Nakagawa using the jitter value of the RF signal of Verboom in view of Nakagawa as suggested by Okada, the motivation being to compute the predetermined performance function of Verboom in view of Nakagawa on which correction of focus precision is based in a manner known in the art to correct focus precision.

Response to Arguments

8. Applicant's arguments filed January 5, 2005 with respect to claims 1, 6 and 7 have been fully considered but they are not persuasive. Applicant argues that Verboom and Nakagawa each individually fail to teach or suggest all of the limitations of claim 1. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It is noted that, as described in the rejections above, it is the combination of Verboom and Nakagawa that teaches or suggests all of the limitations of the

independent claims. Verboom corrects the focus precision by using a signal obtained from an already recorded track closest to said Nth track. When the obtained signal of Verboom is modified through the teachings of Nakagawa so that the obtained signal is an RF signal, the modified Verboom teaches or suggests all of the limitations of the independent claims (see rejections of claims 1, 6 and 7 above).

Applicant argues that it can be inferred that Verboom uses the signal from the SFP track (modified to be an RF signal through the teachings of Nakagawa) as data rather than reading it as a raw RF signal. However, the reading the RF signal as a raw RF signal is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claim recites an RF signal is "used" and an RF signal is "used" whether it is read as data or as a raw RF signal.

Applicant argues that there is no indication in Verboom that Verboom's reference to "the focus-offset value for the SFP track nearest the track to be read is selected from the stored values" is in any way connected to enabling the claimed "correction to be performed without actually moving to the Nth track." However, Verboom discloses that the focus-offset value is added to a focus servo error signal (Col. 6, lines 15-23). The correction is performed without actually moving to the Nth track because the apparatus is already on the Nth track (no actual movement to Nth track to perform correction) because the focus-offset value was determined and stored during initialization using the signal obtained from an already recorded track closest to the Nth track (Col. 3, lines 49-59).

9. Applicant's arguments filed January 5, 2005 with respect to claims 2-5 and 8-10 have been fully considered but they are not persuasive because they are based on the unpersuasive arguments that Verboom in view of Nakagawa fails to teach or suggest the limitations of claim 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V Battaglia whose telephone number is (703) 305-4534. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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3/6/05